

20990PCT GPR54.ST25
SEQUENCE LISTING

<110> INSERM

<120> RECEPTOR AGONIST AND ANTAGONIST USEFUL FOR THE TREATMENT OF GONADOTROPIN RELATED DISEASES

<130> 20990EP

<160> 3

<170> PatentIn version 3.1

<210> 1

<211> 1197

<212> DNA

<213> Homo sapiens

<220>

<221> CDS

<222> (1)..(1197)

<223>

<220>

<221> gene

<222> (1)..(1197)

<223> GPR54 gene

<400> 1

atg cac acc gtg gct acg tcc gga ccc aac gcg tcc tgg ggg gca ccg
Met His Thr Val Ala Thr Ser Gly Pro Asn Ala Ser Trp Gly Ala Pro
1 5 10 15

48

20990PCT GPR54.ST25									
gcc	aac	gcc	tcc	ggc	tgc	ccg	ggc	tgt	ggc
Ala	Asn	Ala	Ser	Gly	Cys	Pro	Gly	Cys	Gly
20									
25									
30									
96									
cca	gtc	cct	tcg	ccg	cg	gcc	gt	tc	gt
Pro	Val	Pro	Ser	Pro	Arg	Ala	Val	Asp	Ala
35									
40									
45									
144									
ttc	gcg	gcg	ctg	atg	ctg	ggc	ctg	gt	tc
Phe	Ala	Ala	Leu	Met	Leu	Gly	Leu	Val	Gly
50									
55									
60									
192									
tac	gtc	atc	tgc	cgc	cac	aag	ccg	atg	cg
Tyr	Val	Ile	Cys	Arg	His	Lys	Pro	Met	Arg
65									
70									
75									
80									
240									
atc	gcc	aac	ctg	gcg	gcc	acg	gac	gt	acc
Ile	Ala	Asn	Leu	Ala	Ala	Thr	Asp	Val	Thr
85									
90									
95									
288									
ccc	ttc	acg	gcc	ctg	ctg	tac	ccg	ctg	ggc
Pro	Phe	Thr	Ala	Leu	Leu	Tyr	Pro	Gly	Trp
100									
105									
110									
336									
ttc	atg	tgc	aag	ttc	gtc	aa	tc	atc	ca
Phe	Met	Cys	Lys	Phe	Val	Asn	Tyr	Ile	Gln
115									
120									
125									
384									
acg	tgt	gcc	act	ctg	acc	gcc	atg	agt	gt
Thr	Cys	Ala	Thr	Leu	Thr	Ala	Met	Ser	Val
130									
135									
140									
432									
gtg	ttc	ccg	ttg	cg	gg	cc	cc	ctg	gg
Val	Phe	Pro	Leu	Arg	Ala	Leu	His	Arg	Arg
145									
150									
155									
160									
528									
gct	gtc	agc	ctc	agc	atc	tgg	gta	gg	cc
Ala	Val	Ser	Leu	Ser	Ile	Trp	Val	Gly	Ser
165									
170									
175									
576									
gtg	ctc	gcc	ctg	cac	cg	cc	cc	tg	gt
Val	Leu	Ala	Leu	His	Arg	Leu	Ser	Pro	Arg
180									
185									
190									
624									
gag	gcc	ttc	ccc	agc	cg	gg	cc	tt	gc
Glu	Ala	Phe	Pro	Ser	Arg	Ala	Leu	Glu	Arg
195									
200									
205									
672									
ctg	ctg	g	ctg	ta	ctg	cc	cc	tg	tc
Leu	Leu	Ala	Leu	Tyr	Leu	Pro	Leu	Leu	Ala
210									
215									
220									
720									
g	cc	at	ct	cg	cc	cc	cc	gt	cc
Ala	Ala	Met	Leu	Arg	His	Leu	Gly	Arg	Val
225									
230									
235									
240									
768									
gcc	at	agc	gcc	ct	ca	gg	ca	ga	cc
Ala	Asp	Ser	Ala	Leu	Gln	Gly	Gln	Val	Leu
245									
250									
255									

20990PCT GPR54.ST25

gtg	cgg	gcc	aag	gtc	tcg	cgg	ctg	gtg	gca	gcc	gtg	gtc	ctg	ctc	ttc		816
Val	Arg	Ala	Lys	Val	Ser	Arg	Leu	Val	Ala	Ala	Val	Val	Leu	Leu	Phe		
260				265					270								
gcc	gcc	tgc	tgg	ggc	ccc	atc	cag	ctg	ttc	ctg	gtg	ctg	cag	gca	ctg		864
Ala	Ala	Cys	Trp	Gly	Pro	Ile	Gln	Leu	Phe	Leu	Val	Leu	Gln	Ala	Leu		
275				280					285								
ggc	ccc	gca	ggc	tcc	tgg	cac	cca	cgc	agc	tac	gcc	gcc	tac	gca	ctt		912
Gly	Pro	Ala	Gly	Ser	Trp	His	Pro	Arg	Ser	Tyr	Ala	Ala	Tyr	Ala	Leu		
290				295					300								
aag	acc	tgg	gct	cac	tgc	atg	tcc	tac	agc	aac	tcc	gca	ctg	aac	ccg		960
Lys	Thr	Trp	Ala	His	Cys	Met	Ser	Tyr	Ser	Asn	Ser	Ala	Leu	Asn	Pro		
305				310					315					320			
ctg	ctc	tac	gcc	ttc	ctg	ggc	tcg	cac	ttc	cga	cag	gcc	ttc	cgc	cgc		1008
Leu	Leu	Tyr	Ala	Phe	Leu	Gly	Ser	His	Phe	Arg	Gln	Ala	Phe	Arg	Arg		
325				330					335								
gtc	tgc	ccc	tgc	gca	ccg	cgc	cgc	ccc	cgc	cgc	ccc	cgc	ccg	ccc	gga		1056
Val	Cys	Pro	Cys	Ala	Pro	Arg	Arg	Pro	Arg	Arg	Pro	Arg	Arg	Pro	Gly		
340				345					350								
ccc	tcg	gac	ccc	gca	gcc	cca	cac	gca	gag	ctg	ctc	cgc	ctg	ggg	tcc		1104
Pro	Ser	Asp	Pro	Ala	Ala	Pro	His	Ala	Glu	Leu	Leu	Arg	Leu	Gly	Ser		
355				360					365								
cac	ccg	gcc	ccc	gcc	agg	gca	cag	aag	cca	ggg	agc	agt	ggg	ctg	gcc		1152
His	Pro	Ala	Pro	Ala	Arg	Ala	Gln	Lys	Pro	Gly	Ser	Ser	Gly	Leu	Ala		
370				375					380								
gca	cgc	ggg	ctg	tgc	gtc	ctg	ggg	gag	gac	aac	gcc	cct	ctc	tga		1197	
Ala	Arg	Gly	Leu	Cys	Val	Leu	Gly	Glu	Asp	Asn	Ala	Pro	Leu				
385				390					395								

<210> 2

<211> 398

<212> PRT

<213> Homo sapiens

<400> 2

Met	His	Thr	Val	Ala	Thr	Ser	Gly	Pro	Asn	Ala	Ser	Trp	Gly	Ala	Pro	
1				5				10				15				

Ala	Asn	Ala	Ser	Gly	Cys	Pro	Gly	Cys	Gly	Ala	Asn	Ala	Ser	Asp	Gly	
				20				25				30				

Pro	Val	Pro	Ser	Pro	Arg	Ala	Val	Asp	Ala	Trp	Leu	Val	Pro	Leu	Phe	
				35				40				45				

20990PCT GPR54.ST25

Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile
50 55 60

Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr
65 70 75 80

Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val
85 90 95

Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp
100 105 110

Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala
115 120 125

Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr
130 135 140

Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu
145 150 155 160

Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro
165 170 175

Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser
180 185 190

Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn
195 200 205

Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr
210 215 220

Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro
225 230 235 240

Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala
245 250 255

Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe
260 265 270

Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu
275 280 285

20990PCT GPR54.ST25

Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu
290 295 300

Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro
305 310 315 320

Leu Leu Tyr Ala Phe Leu Gly Ser His Phe Arg Gln Ala Phe Arg Arg
325 330 335

Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly
340 345 350

Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu Leu Arg Leu Gly Ser
355 360 365

His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala
370 375 380

Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu
385 390 395

<210> 3

<211> 398

<212> PRT

<213> Homo sapiens

<400> 3

Met His Thr Val Ala Thr Ser Gly Pro Asn Ala Ser Trp Gly Ala Pro
1 5 10 15

Ala Asn Ala Ser Gly Cys Pro Gly Cys Gly Ala Asn Ala Ser Asp Gly
20 25 30

Pro Val Pro Ser Pro Arg Ala Val Asp Ala Trp Leu Val Pro Leu Phe
35 40 45

Phe Ala Ala Leu Met Leu Leu Gly Leu Val Gly Asn Ser Leu Val Ile
50 55 60

Tyr Val Ile Cys Arg His Lys Pro Met Arg Thr Val Thr Asn Phe Tyr
65 70 75 80

20990PCT GPR54.ST25

Ile Ala Asn Leu Ala Ala Thr Asp Val Thr Phe Leu Leu Cys Cys Val
85 90 95

Pro Phe Thr Ala Leu Leu Tyr Pro Leu Pro Gly Trp Val Leu Gly Asp
100 105 110

Phe Met Cys Lys Phe Val Asn Tyr Ile Gln Gln Val Ser Val Gln Ala
115 120 125

Thr Cys Ala Thr Leu Thr Ala Met Ser Val Asp Arg Trp Tyr Val Thr
130 135 140

Val Phe Pro Leu Arg Ala Leu His Arg Arg Thr Pro Arg Leu Ala Leu
145 150 155 160

Ala Val Ser Leu Ser Ile Trp Val Gly Ser Ala Ala Val Ser Ala Pro
165 170 175

Val Leu Ala Leu His Arg Leu Ser Pro Gly Pro Arg Ala Tyr Cys Ser
180 185 190

Glu Ala Phe Pro Ser Arg Ala Leu Glu Arg Ala Phe Ala Leu Tyr Asn
195 200 205

Leu Leu Ala Leu Tyr Leu Leu Pro Leu Leu Ala Thr Cys Ala Cys Tyr
210 215 220

Ala Ala Met Leu Arg His Leu Gly Arg Val Ala Val Arg Pro Ala Pro
225 230 235 240

Ala Asp Ser Ala Leu Gln Gly Gln Val Leu Ala Glu Arg Ala Gly Ala
245 250 255

Val Arg Ala Lys Val Ser Arg Leu Val Ala Ala Val Val Leu Leu Phe
260 265 270

Ala Ala Cys Trp Gly Pro Ile Gln Leu Phe Leu Val Leu Gln Ala Leu
275 280 285

Gly Pro Ala Gly Ser Trp His Pro Arg Ser Tyr Ala Ala Tyr Ala Leu
290 295 300

Lys Thr Trp Ala His Cys Met Ser Tyr Ser Asn Ser Ala Leu Asn Pro
305 310 315 320

20990PCT GPR54.ST25

Leu Leu Tyr Ala Phe Leu Gly Ser His Phe Arg Gln Ala Phe Arg Arg
325 330 335

Val Cys Pro Cys Ala Pro Arg Arg Pro Arg Arg Pro Arg Arg Pro Gly
340 345 350

Pro Ser Asp Pro Ala Ala Pro His Ala Glu Leu His Arg Leu Gly Ser
355 360 365

His Pro Ala Pro Ala Arg Ala Gln Lys Pro Gly Ser Ser Gly Leu Ala
370 375 380

Ala Arg Gly Leu Cys Val Leu Gly Glu Asp Asn Ala Pro Leu
385 390 395